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ABSTRACT

Supplementing the related document SO 008 809, this bulletin gives recent statistics on and describes current developments in the physical and human geography of the Netherlands. Well illustrated with maps, diagrams, and photographs, this source book examines population growth and distribution, the agricultural and industrial economy, commerce and transport, physical planning, public transportation and traffic, and current water control projects. Services and activities provided by the Information and Documentation Center for the Geography of the Netherlands are also described. (DE)

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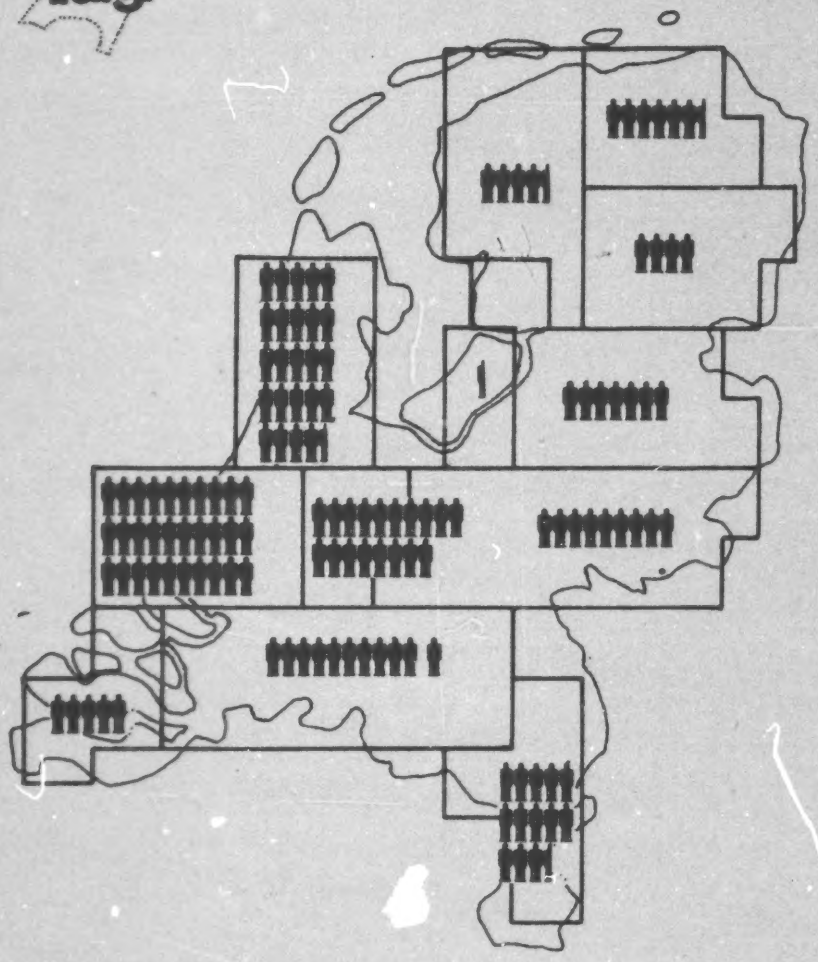

SU008831

INFORMATIE- EN DOCUMENTATIE-CENTRUM VOOR DE GEOGRAFIE VAN NEDERLAND
INFORMATION AND DOCUMENTATION CENTRE FOR THE GEOGRAPHY OF THE NETHERLANDS
CENTRE D'INFORMATION ET DE DOCUMENTATION POUR LA GÉOGRAPHIE DES PAYS-BAS
INFORMATIONS- UND DOKUMENTATIONSZENTRUM FÜR DIE GEOGRAPHIE DER NIEDERLANDE

I.D.G. BULLETIN 1974

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Cover: Population density by province as on 1.1.1974.
1 figure = 35 inhabitants per km^2.
Source: CBS Statistical Diary for 1974.

FOREWORD

The Information and Documentation Centre for the Geography of the Netherlands, which was established with the aim of keeping foreign geographers informed about the geography of the Netherlands, sent out by way of experiment in the summer of 1973 some 400 copies of a first I.D.G. Bulletin in four different language versions. The contents were intended in the first place for those people outside the Netherlands who are concerned, either as teachers or authors, with the teaching of the geography of the Netherlands.

The reactions which have been received were, in general, very favourable, so that the I.D.G. has decided to continue with its course of action, while the Ministry of Foreign Affairs, through its Directorate of Cultural Co-operation and Information, has shown its readiness to participate in this project by distributing the Bulletin through Dutch Embassies and Consulates abroad. This has so greatly widened the circulation of the Bulletin that it has been decided to reproduce certain relevant portions of the first issue in this 1974 Bulletin.

The contents may be regarded as supplementing the booklet entitled "A Compact Geography of the Netherlands", which was also the fruit of a collaboration between the Ministry of Foreign Affairs and the I.D.G. The annual publication of the Bulletin makes possible to supply recent statistics on a regular basis and to follow closely current developments.

For further information or documentation, you are invited to apply at any time to the Netherlands Embassies and Consulates or to the Information and Documentation Centre for the Geography of the Netherlands, Heidelberglaan 2, Utrecht.

Utrecht, 1974.

Drs. H. Meijer,

Manager of the Office of the I.D.G.

SOURCES OF PHOTOGRAPHS AND MAPS

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INFORMATION AND DOCUMENTATION CENTRE FOR THE GEOGRAPHY OF THE NETHERLANDS

The Centre was set up to provide, on a non-profit making basis, information and documentation on the geography of the Netherlands to institutions and persons abroad requiring such material for educative or other purposes.

The Centre is endeavouring to achieve its aims by:
- running an office housed in the Geographical Institute of the State University at Utrecht, but which may be established in some other section of one of the university institutes, to be designated by the Board of Management;
- replying to questions on the geography of the Netherlands;
- compiling bibliographies;
- tracing written and visual documentary material and helping applicants obtain it;
- supplying addresses;
- collecting data from articles and books on the Netherlands published abroad in languages other than Dutch;
- encouraging the publication of written and visual material in foreign languages, which will help users to form an accurate picture of the Netherlands;
- making a critical study of written and visual material on the Netherlands published abroad, and if necessary commenting on it.

The idea of establishing such-like Centres resulted from a conference, held in Ireland in 1963 under the auspices of the Council of Europe.
The Centre has been in operation since the 21st of September 1964. Under pressure of circumstances (arising from a question in Parliament about inaccurate comments on the Netherlands in a foreign geography book), it had to start work before the appropriate organizational form had been finally determined.
On the 9th of December 1969 the Centre acquired the legal form of an incorporated body, and the Centre's Office functions since the 1st of April 1971.

The activities engaged in upto now can be divided into several categories:
- answering letters received from all parts of the world containing a very great variety of requests for information on the geography of the Netherlands, for addresses, for visual material and for assistance in the preparation of field trips;
- receiving and generally assisting foreign authors who are doing research on the geography of the Netherlands. In order to be able to give these visitors a short overall picture of the geography of the Netherlands, a series of 50 colour slides is composed, of which the accompanying text is recorded on tape in four languages;
- co-operating with the Information Department of the Ministry of Foreign Affairs in making a school map of the Netherlands to a scale of 1: 300,000 and writing an accompanying booklet on the geography of the country. Both publications have been translated into ten languages, and both the booklet and the wall map are appearing at the moment in a completely revised second edition.
- compiling a bibliography of the publications on the geography of the Netherlands that have appeared in foreign languages, particularly since 1945, and acquiring as many as possible of them with a view to building up a library.
  Booklists for distribution are available in the english, french, german and dutch languages.
  Further a card-system is set up on visual material on the Netherlands (maps, photoos, films, etc.);
- trying to give the Centre and its activities as much publicity among foreign geographers as possible;
- the compilation of geographical excursion guides. In 1973, the "Zuiderzee-IJsselmeer"guide appeared in Dutch and English, and in 1974 the guide to the Sout-West Netherlands in Dutch, French, German and English.

GEOGRAPHY OF THE NETHERLANDS IN FOREIGN TEXTBOOKS

As is evident from the aforementioned summary of activities of the Information and Documentation Centre for the Geography of the Netherlands, these also include critically examining and, if necessary, commenting on foreign articles about this country.
During the three years that the Centre's Office has been functioning officially, the texts, maps, illustrations etc. of a large number of foreign textbooks and atlasses (so far mainly from West Germany, Great Britain and Belgium) have been examined.

The authors and/or publishers have been informed of the findings (in several cases the authors had requested this). Besides this, we thought it useful here and now to provide others, such as teachers who use these aids, with a summary of the most widely encountered inaccuracies and omissions. For in many cases it may be years before the latest information can be incorporated in a reprint.

We wish to state emphatically that we are not out to find as many mistakes as we can. Our sole purpose is to make a positive contribution towards the creation of an image of the Netherlands that closely corresponds with reality.

It is inevitable that textbooks, which as a rule cannot be reprinted every year, should contain information which becomes obsolete soon after publication. Such information consists partly of statistical data, partly of descriptions of rapidly changing objects, notably – in the Netherlands – civil engineering works.
Also in such areas as demography, economics etc. many a geography textbook contains facts and figures about the Netherlands, which are obsolete or, because the emphasis is wrong, are brought into too much or too little prominence.

In this bulletin we have endeavoured to sketch the current situation in regard to a number of subjects that feature in most geography textbooks. In doing so we have drwan on the recent statistical data (taken for the greater part from the 1974 Pocket Yearbook of the Central Bureau of Statistics in The Hague).

POPULATION

Area and number of inhabitants

The figures in many textbooks and other publications denoting the area of the Netherlands often differ widely. In fact, there are three possibilities:

a – the land area (i.e. excluding those waters that are wider than 6 m)
b – the total area divided into municipalities
c – the total territory of the Netherlands (i.e. including the estuaries, territorial waters, etc.).

As at 1st January 1974 these figures were as follows: *

a – 33 812 sq.km.
b – 36 946 sq.km.
c – 41 160 sq.km.

In this connection we would point out that it is customary to use the figure given under b for the area of the Netherlands; however, for calculating the population density per sq.km. (of land), the figure under a is invariably used.
Of the area of 36 946 sq.km. 68 per cent was cultivated land and 8 per cent woodland on 1st January 1974.

On the same date, the population numbered 13 491 020, or 399 inhabitants per sq.km. of land.

Demographic indices

In comparison with the figures found in many a textbook, the birth rate in the Netherlands has declined steadily in recent years, while the death rate has risen slightly. In 1973 these figures (per 1000 inhabitants) were 14,5 and 8,2 respectively, resulting in a lower population surplus of 6.3, but this was increased in 1973 by net immigration of 1.5 per 1000 (mainly foreign workers and immigrants from the overseas territories).

Growth and distribution

It is common knowledge that the population is distributed very unevenly over the country. In the three "Randstad"-provinces of South Holland, North Holland and Utrecht, 46 per cent of the population occupy 21 per cent of the total area of the country.
The density figures of the provinces range from 149 in Drenthe to 1 053 in South Holland.

The description which follows will therefore deal with the growth and distribution of the population during the past five years, making use of statistics relating to:

– the five regions into which the country has been divided by the Central Bureau of Statistics (C.B.S.);
– the eleven provinces;
– the eighteen towns with more than 100,000 inhabitants on 1st January 1969 and/or on 1st January 1974 (see fig. 1).

Among the striking facts to emerge from the table on page 9 are the following:

– the great differences in population density;
– the differences in rate of growth.

The first fact can be explained in the light of differences in relative location. Historically, the Western Netherlands, situated on the North Sea and the great rivers, was the centre of economic activity. Later, the Eastern and Southern Netherlands also began to experience a more rapid growth, partly as a result of impulses from the west and partly because the relative location of these areas also became more significant, especially in relation to the neighbouring countries of West Germany and Belgium.

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1 sq.km. = 0,386 sq.mile.

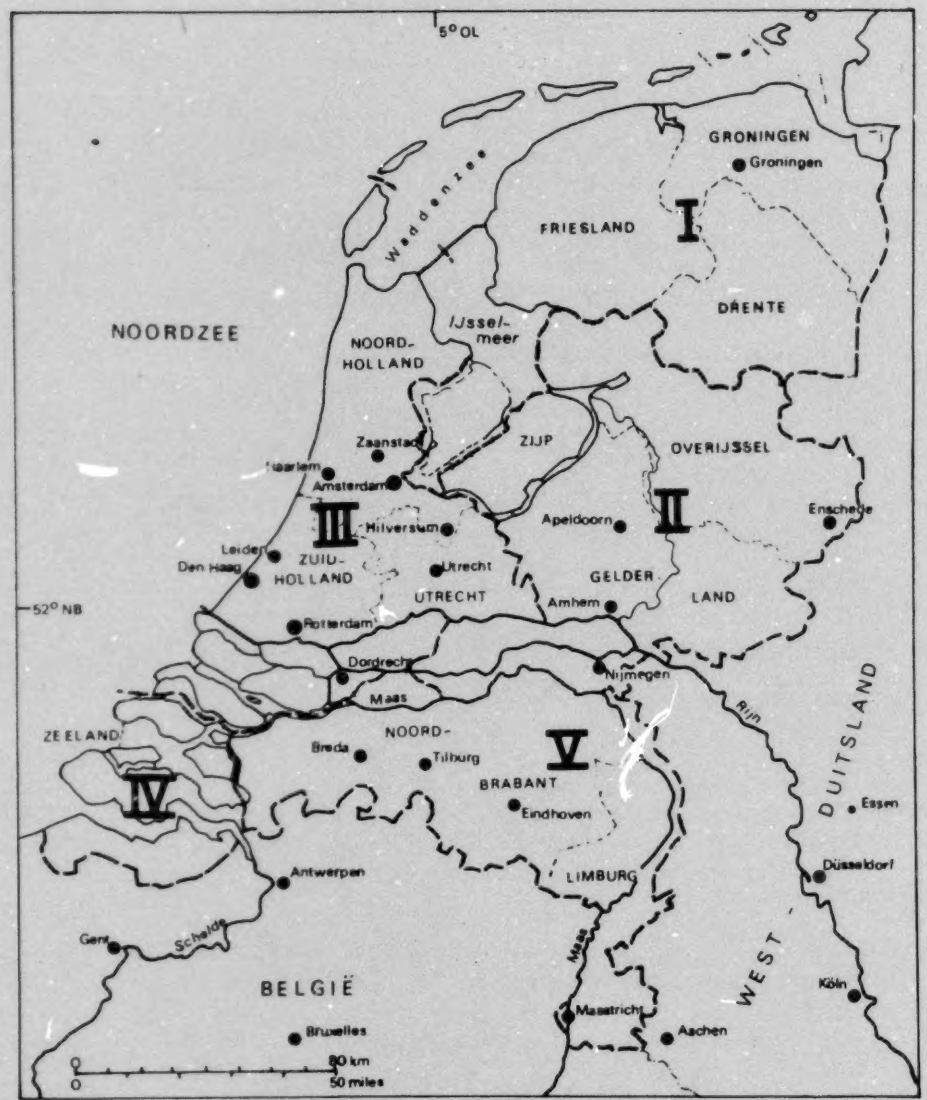


Fig. 1 *Regions, provinces and cities*

I *The Northern Netherlands*
II *The Eastern Netherlands*
III *The Western Netherlands*
IV *The South-Western Netherlands*
V *The Southern Netherlands*

The predominantly agricultural regions of the north and south-west continued to lag behind. From the national and international standpoint the north is rather eccentrically situated, while the delta character of the south-west until recently ensured the isolation of the islands and peninsulas. The execution of the Delta Plan, the increasing economic integration with Belgium (Benelux) and the growth in port and industrial activity along the Western Scheldt are rapidly changing the situation in the South-West Netherlands, as appears from the figures for percentage growth.

1st Jan. 1974	Landarea in sq.km.	population x 1000	density inhabitants per sq.km.	growth since 1st January 1969
Northern Netherlands	8314	1473,6	177	6,0%
Groningen	2326	532,6	229	3,6
Friesland	3340	547,2	164	6,0
Drenthe	2648	393,7	149	9,5
Eastern Netherlands	9774	2592,7	265	8,0%
Overijssel	3801	966,8	254	6,6
Gelderland	5012	1601,0	319	8,2
S.IJssel Lake Polders	961	24,9	26	93,0
Western Netherlands	6854	6150,5	898	3,2%
North Holland	2656	2282,7	859	2,4
South Holland	2869	3018,5	1053	2,5
Utrecht	1329	849,3	639	8,3
South-West Netherlands	1790	322,9	180	7,0%
Zeeland	1790	322,9	180	7,0
Southern Netherlands	7082	2948,6	416	7,4%
North Brabant	4915	1910,3	389	9,0
Limburg	2167	1038,3	479	4,8
NETHERLANDS *	33812	13491,0	399	5,4%

* area exclusive of waters wider than 6 metres;
number of inhabitants, including persons with no fixed abode, entered in the Central Population Register.

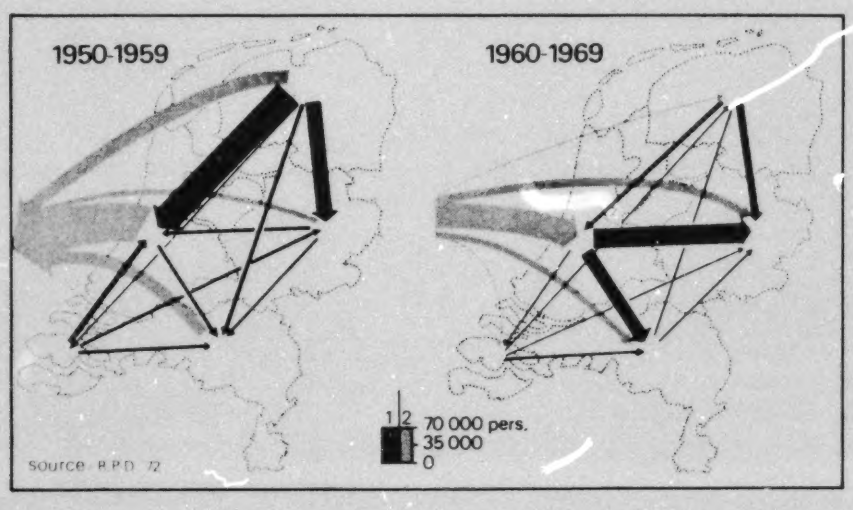


Fig. 2 – *1. Internal migration.*
2. Foreign migration.

The difference in *rate of growth* are largely the result of migration movements. Map 2, relating to internal and foreign migration, illustrates this clearly.

- during the 1950's there was a considerable emigration from all parts of the country to such countries as Canada, Australia and New Zeeland.
  Within the country there was a pronounced migration into the west. The North registered a considerable net migration loss.
- during the 1960's the net migration loss became a net migration gain, largely caused by the influx of large numbers of foreign workers from the Mediterranean region and by the arrival of many inhabitants of the parts of the Kingdom overseas, notably from Surinam. Within the country, the great net migration gain in the west has been transformed into a large net migration loss, principally to the East and South. Migration from the North has been greatly reduced, as has that from the South-West.

The following are now regarded as the main "problem areas":

- the West, with physical over-population in the urban areas (problems relating to living space, recreation, traffic, environment);
- the North, with a lagging economic structure;
- South Limburg, industrial restructuring arising from the closing of the coal mines.

The Government's population distribution policy is largely directed towards helping these three areas. The Government is trying to encourage the economic development of the North Netherlands and South Limburg, in particular, through the operation of an active incentives policy.

At the same time, an attempt is being made to relieve congestion in the West by such measures as the following:

- a programme extending over several years to move a number of government departments from The Hague to such places as Groningen, Leeuwarden, Emmen, Zwolle and Heerlen.
- the law providing for a selective investment scheme, under which an investment tax can be levied on investments in industrial plant and buildings in the three western provinces. The Act was approved at the beginning of 1974, but the date on which it comes into force has not yet been decided.

The Western Netherlands

To return to the Western Netherlands, attention is drawn to the changes in population distribution within this region. It appears from the table on page 9 that the west is relatively the slowest growing region. The large cities in the west are even declining in population, as can be seen from the table below, which also includes the large towns in the rest of the country. (The rapid growth of Dordrecht and Maastricht is mainly the result of the annexation of neighbouring municipalities).

Towns	Inhabitants x 1000 1st January 1969	Inhabitants x 1000 1st January 1974	Increase (+) or decrease (–) as %
Amsterdam	845,8	770,8	– 8,8
Rotterdam	699,2	635,9	– 9,1
The Hague	563,6	494,7	–12,2
Utrecht	276,3	263,6	– 4,6
Haarlem	172,9	168,2	– 2,7
Dordrecht	88,1	101,3	+ 15,0
Leiden	102,5	96,8	– 5,6
Hilversum	100,4	95,0	– 5,4
Zaanstad	–	124,9	–
Eindhoven	187,2	191,8	+ 2,5
Groningen	167,7	166,8	– 0,5
Tilburg	151,2	152,5	+ 0,9
Nijmegen	147,2	148,2	+ 0,7
Enschede	136,9	142,1	+ 3,8
Arnhem	134,3	127,7	– 4,9
Apeldoorn	120,9	130,7	+ 8,1
Breda	120,0	119,2	– 0,7
Maastricht	94,6	111,6	+ 18,0

Since the total population of the Western Netherlands increased during the period, albeit slowly, this indicates that the smaller places have grown relatively quickly, i.e., there has been suburbanisation (photo III, page 13).
The chief causes of this development have been the redevelopment of the older residential areas in the inner cities (photos I and II) and the problems of congestion referred to above.
The opportunity to live more cheaply and in a better quality home in the more pleasant living environment of the smaller places has been the great incentive to moving.

As in many metropolitan regions in the world, suburbanisation has created problems:
- unbalanced growth of small centres, with which their infrastructure and service facilities are unable to cope;
- a greatly increasing commuter traffic, which, because of its highly dispersed nature, can be absorbed only to a small degree by public transport;
- decline of the economic, social and cultural functions of the old city centres.

The Randstad Holland, where these problems are present in their most extreme form, is faced by an additional spatial problem, the fact that the smaller places, where the growth is concentrated, lie for a large part *within* the urban ring, i.e. in the so-called "Green Heart" of the Randstad (fig. 3, page 13).
There have been repeated pleas to safeguard this central open zone from losing its buffer function as a result of excessive urbanisation, for example, in the Second Memorandum on Physical Planning in the Netherlands, 1966.

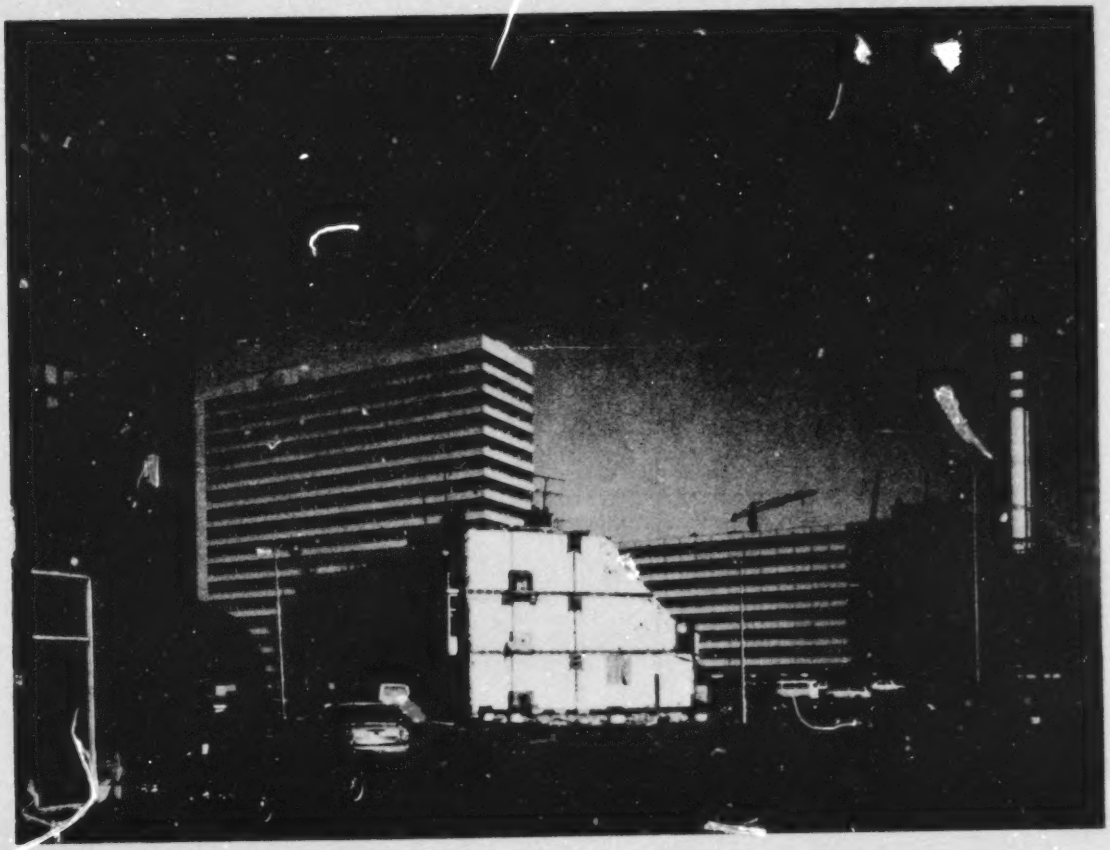


Photo 1 – Urban development – The Hague, the Bezuidenhout district.
This suffered heavily from bombing during the last War; the remaining 19th century buildings are now being replaced by high-rise office blocks and new access roads to the city.

Photo II – *Redevelopment of the area around Utrecht Station.*
In the past few years the whole area of 19th century buildings between the Central Station (left) and the old city centre has been demolished and replaced by a single project known as the "Hoog Catharijne". This includes hotels (top left), office blocks, a conference and trade fair centre, a stadium, shippong centre and covered car park. Pedestrian ways are separated from the rest of the traffic and on a different level. Part of the canal which has surrounded the city centre for centuries had to be filled in to make room for motorized traffic (foreground). At right angles to it is the pedestrian way which, running from left to right, links up with all sections, over the station, through the shopping centre and over the roadway.

The figures below, for the years 1970 and 1971, illustrate the rapid population growth in this zone:

		per mille per annum			
1970–1971 *	Pop. 1 Jan 72 x 1,000	Natural increase	Inland migration change	Total foreign migration	Net population change
Netherlands	13.269	9,4	–	+ 2,5	+ 11,9
W. Netherlands	6.114	7,9	– 2,3	+ 3,2	+ 8,3
Randstad Urban Ring	4.186	5,2	–11,4	+ 4,0	– 2,2
Randstad Central Zone	1.027	14,2	+16,8	+ 1,6	+ 32,6

These figures suggest that the fears that the "Green Heart" (photo III) will fill up are not groundless. Both the natural increase and the net migration gain (proportionately more young families) are well above the national average. Fig. 3 on page 13, gives a visual impression of the developments just described for the years 1970 and 1971.

* From the Report "Wonen en werken in het Groene Hart" (Living and working within and around the Green Heart), Geogr. Inst. State University Utrecht, 1973.

Fig. 3 – Mean annual percentage increase in population per economic/geographic area, 1970 – 1971

1 = limits of the northern and southern flanks of the Conurbation

2 = limits of the economic/geographic areas

Northern flank	*Southern flank*
H : Haarlem	*L : Leyden*
A : Amsterdam	*G : The Hague*
H : Hilversum	*R : Rotterdam*
U : Utrecht	*D : Dordrecht*

(See "Living and Working in the Green Heart" Geog. Inst. Utrecht, 1973)

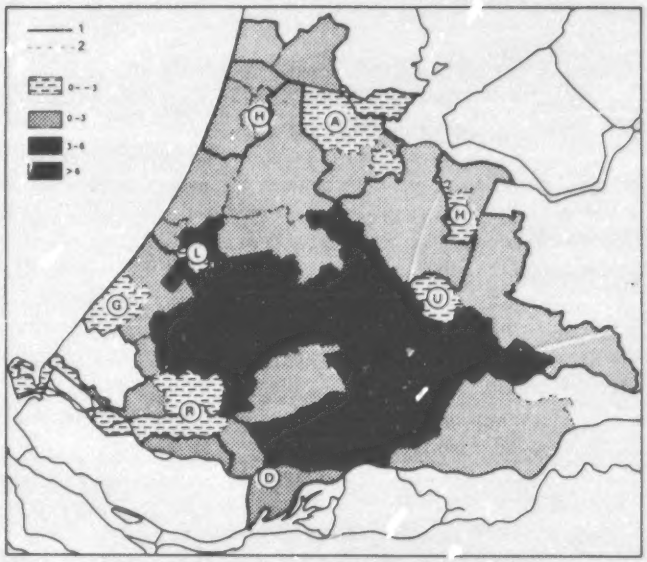


Photo III – The West Holland Conurbation's "Green Heart" is shrinking: Zoetermeer, east of The Hague.
The photograph, taken looking east, shows the old village of Zoetermeer in the background among the trees. In only a few years the village has grown into an important dormitory town for The Hague. The number of inhabitants on 1.1.1964 was 10,300; by 1974 it had risen to 36,600. Extreme right: the main motorway and railway line between The Hague and Utrecht, which are already proving inadequate for alle the commuter traffic between Zoetermeer and The Hague. A separate line between Zoetermeer and The Hague (distance to city centre 14 km) is under construction.

ECONOMY

It is hardly surprising that to foreign geographers the colourful bulb fields, the "greenhouse landscape" of Westland, and the low, flat pastures with black and white cattle are both conspicuous and characteristic features of the Dutch landscape. Nevertheless, this image given rise to two misconceptions.

In the first place it can create the impression that the Netherlands is a predominantly agrarian country. Without wishing to detract from the importance of the agrarian sector (which accounts for about one fourth of the value of exports), we must counter this popular misconception: in 1973 agriculture and fisheries represented 6,5 per cent of the total volume of labour and 6 per cent of the national income.

For mining and the other industries combined these figures were 34,5 and 39 per cent respectively.

In the second place, this often creates the impression that practically the whole of Holland consists of low-lying polders, which are used for cattle farming, market gardening and horticulture. The fact that the south-eastern half of the country consists of more elevated sandy soil and that 32 per cent of the cultivated land is used for field crops is then overlooked.

For centuries the struggle for prosperity in the Netherlands has been characterised by a steadily increasing specialisation and intensification.

As far as specialisation is concerned, foreign commerce had already appeared in the Middle Ages, having developed partly from the fisheries, and from commerce developed industry. It was particularly the agricultural depression at the end of the 19th century which also made it necessary to turn to specialisation in agriculture and horticulture (see page 15). After 1945; the increased economic integration, as in Benelux and the E.E.C., has further strengthened these tendencies. Intensification was a necessary accompaniment to this because of the rapid growth of population and population density.

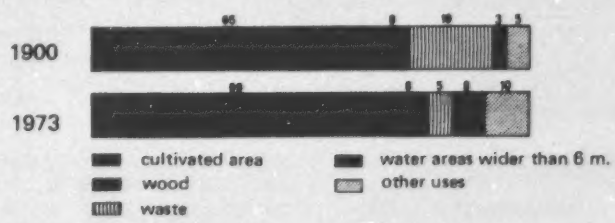
All these developments have resulted in considerable changes in the structure of the working population:

Working population (in per cent)	1900	1973
Agriculture and fishing	31	6,5
Mining and manufacturing	32	34,5
Trade and transport	17	25,7
Other occupations + unemployment (2,3% in 1973)	20	33,3

Initially, beginning in the 19th century, there was principally a shift from agriculture to industry, but, later, services became the most important growth sector, as appears *inter alia* from the following figures about the source of the national income in 1963 and 1972.

National income (in per cent)	1963		1972	
Agriculture and fishing	9		6	
Mining and manufacturing	42		39	
Trade and transport	23	49	23	55
Other occupations	26		32	

Changes also occured in the forms of land use, as appears from the bardiagrams below. *



* From: "Zeventig jaren Statistiek in tijdreeksen" (Seventy years of statistics), The Hague, Central Bureau of Statistics, 1970.

The most striking change is the decline in the area of waste land and the doubling of the category of "other" land uses (i.e. towns, roads, industrial estates etc.).
Lastly, the following table shows the employment structure of the different regions. The South-West Netherlands (i.e. province of Zeeland) of the other tables is here included with the Western Netherlands.

Employment structure, by region

Working population 1970* (in per cent)	Agriculture	Industry	Services	Unemployed	Total
North	12,5	39,3	45,9	2,3	100
East	11,1	45,0	42,8	1,2	100
West	4,7	36,3	58,2	0,9	100
South	7,3	50,0	41,2	1,5	100
Netherlands	7,2	41,0	50,6	1,2	100

The uneven distribution of the total working population over the country should not be forgotten here: North 10,4%, East 18,1% West 51,0%, South 20,5% (1970). This gives a completely different picture for the distribution of the *absolute number* of persons employed per sector over the four regions, with the West always coming in first place.

Agriculture

Perhaps in no other sector of economic life are the processes of specialisation and intensification so striking as in agriculture. The import of agricultural products from countries with lower production costs, resulting from more favourable conditions of production (e.g. cereals from North America), was already forcing the Dutch farmers to make adjustments in the 19th century. They concentrated on types of farming to which the Netherlands proved to be suited both through physical (soil, climate) and socio-economic factors (high population density, high level of development), i.e. horticulture and livestock farming. Arable farming was restricted to the areas best suited to it (photo IV, page 16).
As a result of this far-reaching adaptation to production conditions, important regional differences appeared in the uses of farmland:

Crops and grass 1971** (in per cent)	North	East	West	South-West	South	Netherlands
Arable farming	35,0	24,6	23,8	75,7	33,8	32,4
Horticulture	0,9	3,6	10,9	9,6	7,7	5,4
Grassland	64,1	71,8	65,3	14,7	58,5	62,2

The highest percentage of arable land is to be found on the fertile and well-drained marine clay soils of the South-West Netherlands (and further, in the IJssel Lake-Polders). Horticulture is most important in the West, where it is favoured by suitable soils, a mild maritime climate, good transport facilities and a large market. Except for the South-West, grassland occurs in every region, both on the wet clay and peat soils of the low-lying North and West and on the sandy soils of the higher East and South.

* Source: Regionale ontwikkeling van de werkgelegenheid en het spreidingsbeleid 1970-2000 (Regional development of employment and the redistribution policy) Centraal Planbureau, The Hague, 1972.

** Source: Regional Pocket Yearbook, Netherlands Central Bureau of Statistics, The Hague, 1972.

Photo IV – *Haarlemmermeer Polder (left) with its boundary canal and aqueduct crossing the motorway between Amsterdam and The Hague (E10). The old moorland (right) is now used for cattle farming and horticulture; the old sea clay in the Polder, which is 4½ to 5 metres below sea level and was drained in 1852, is used for growing crops.*

There is a continual striving to increase the yields per hectare, as appears, for example, from the following arable figures:

Annual yield in kg. per hectare *	1901/10	1971
Wheat	2200	5000
Potatoes	13500	37500
Sugar beet	30500	49000

Important in this connection are the efforts to raise the average size of holding, generally within the framework of land consolidation schemes, leading to a great reduction in the total number of holdings. The results of this proces during the past eleven years are summarised in the table on page 17. In considering these figures, it should be noted that the horticulture holdings, numbering approximately 35,000 in 1972, are also included and this explains the still very low average size of holding.

* Source: Statistiek van de land- en tuinbouw (Statistics of agriculture), C.B.S., The Hague, 1971.

area of holdings	1961	1972
total no. of holdings	300 157	172 516
area of cultivated land (in ha.)	2 314 200	2 113 800
average area of holding (ha.)	7,7	12,2

The result of all these developments is that the value of the export of agricultural products exceeds that of the agricultural imports. The following table gives the total value of imports and exports of a few major agricultural products.

1970 Products	Imports in million guilders	Products	Exports million guilders
cereals	1370	meat & meat products	2710
oil seeds		dairy products	1830
raw oils and fats	1305	horticultural products	1830
animal feeding stuffs	1050		
total	7250	total	11490
as % of total imports	15	as % of total exports	27

Industry

As far as mineral extraction is concerned, we shall limit ourselves here to the so-called fossil fuels, which have captured the headlines as a result of the oil crisis of the winter '73-'74. The following table illustrates the changes in production, imports, exports and consumption since 1963 (see also fig. 4):

Heat equivalent basis in millions of therms *	Coal		Petroleum		Natural gas	
	1963	1972	1963	1972	1963	1972
Production	3197	781	879	650	206	19506
Imports	2965	1144	10690	38695	–	–
Exports	1516	838	3738	23598	2	8106
Available	4646	1087	7831	15747	204	11400

* 1 therm = 25,200 kcal.

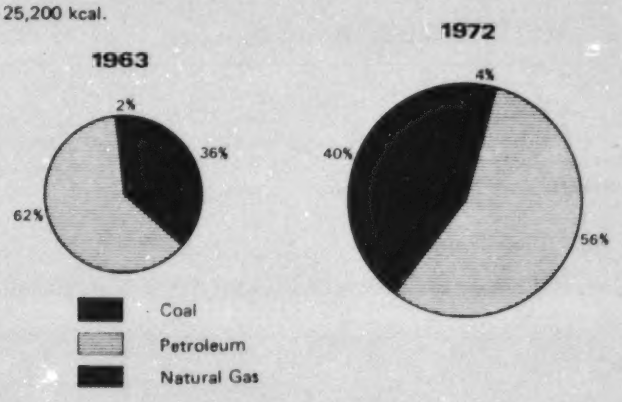


Fig. 4 – Energy Consumption 1963-1972.
Source: CBS Statistical Diary for 1973.

The great decline on both production and consumption of *coal* is clearly evident. Not unexpectedly there has been talk during the oil crisis of reviving the coal mining industry, but the idea has had to be abandoned for both economic and technical reasons, so that it remains the intention to close the last mines in 1975.

As far as *petroleum* in concerned, it is apparent that home production is becoming increasingly insignificant, both in absolute and relative terms. What does appear from the table is the great importance of the Netherlands, and particularly of Rotterdam-Europort, as a centre of petroleum importing and refining for Western Europe (photo V). This position does not seem to have been greatly harmed by the oil crisis, although there have been voices in the Netherlands urging a more cautious policy in respect of the country's *natural gas* (see the export figures). 50% of the total natural gas consumption in the E.E.C. now derives from the Netherlands.

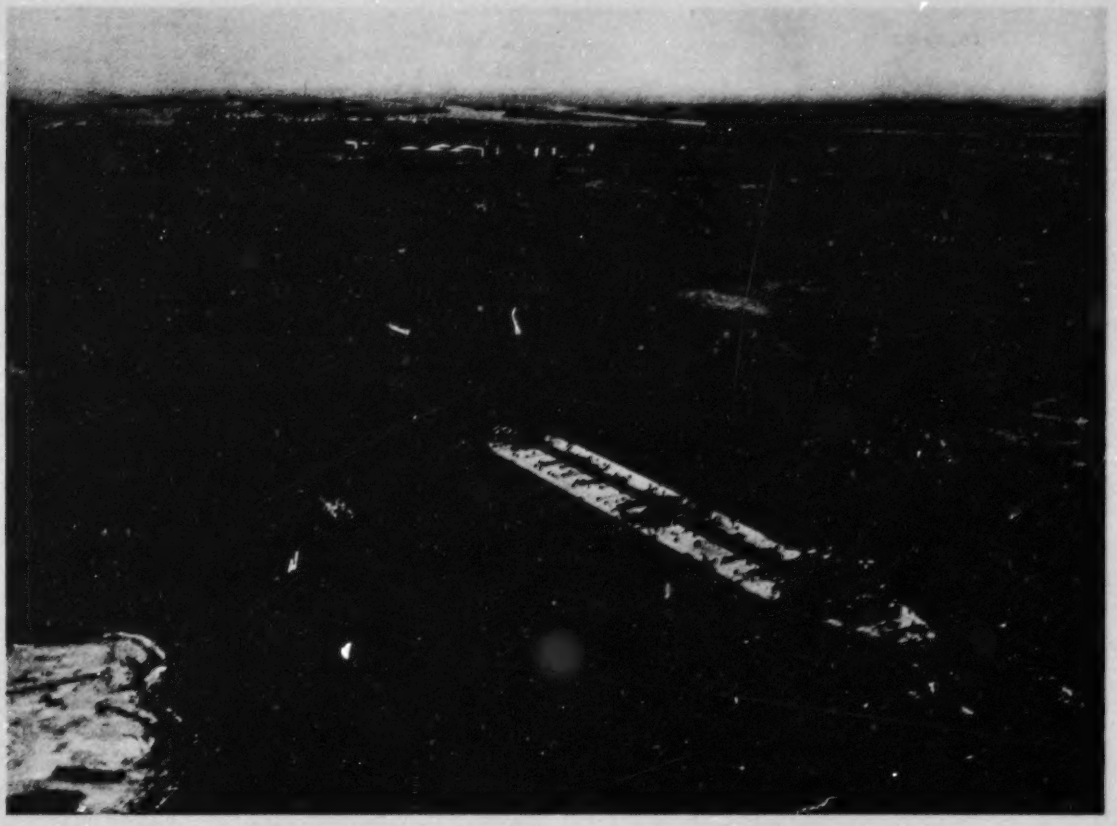


Photo V – *EUROPOORT*
Here we see a super tanker entering Europoort, a western extension of the port of Rotterdam. The dredging of the deep dock basins and a 12 km-long channel into the North Sea has enabled Europoort to take tankers of up to 250,000 tons. In the centre background, on the island of Rozenburg, ore is being transshipped. (Left: ocean-going vessels; right: inland shipping). Behind, the oil refineries can be seen.

The *main industries* are the metal industry, the food and allied products industry, the chemical industry and the textile industry. The growth rates of these industries vary considerably, as is evident from the table below.

Industry	1972 Turnover in Dfl.m.	Volume indices (1963 = 100)
Metal	29,80	180
Food	26,85	150
Chemical	16,85	351
Textile	4,85	116
Industry total	96,40	181

In the textile industry there is clear evidence of crisis conditions, caused mainly by competition from man-made fibres and countries producing more cheaply. Thanks to a marked increase in productivity (by 69 per cent since 1963, compared with 65 per cent for industry as a whole), production showed some increase, but both the number of mills and the number of workers is steadily declining. Especially those areas where centres of the textile industry are to be found, such as Twente (Enschede) and North Brabant (Tilburg), are experiencing the adverse effects of this trend (fig. 5).

Fig. 5 – Industrial centres listed on page 20.
1 = Areas where the reduction in employment in the textile industry between 1963 and 1970 was greater than the national average, i.e. – 28 %

(See: A. C. M. Jansen and M. de Smidt "Industrie en ruimte" (Industry and Space), Assen, 1974.)

Photo XIV – Reservoirs for drinking water in the Biesbos, looking north. Until a short time ago the Biesbos was a unique natural area, being a fresh water tidal delta, between the River Amer (or lower reaches of the Maas) in the foreground and the New Merwede (or lower reaches of the River Waal, a branch of the Rhine) in the centre of the photograph. Two of the four reservoirs planned can be seen, which will be fed by water from the Maas, holding 34.2 million cu.m. and 15.3 million cu.m. respectively. In the background, left, part of the town of Dordrecht can be seen. Water is piped from the reservoirs to Rotterdam which has recently begun to use water from the Maas for drinking purposes instead of the heavily polluted Rhine water.

the Netherlands discussed the treatment of the geography of the two countries in their respective geography textbooks. It became clear that, in modern geography teaching, the complete treatment of the georgaphy of a country is giving way increasingly to methods by which examples of geographical relevance from particular countries are discussed. The I.D.G. hopes that, by making available documentation such as the present bulletin, it can contribute to making a sound selection of subjects from the geography of the Netherlands and to their being correctly treated.
Following upon the fruitful exchange of view at Brunswick, the I.D.G. hopes to be able to hold discussions in the near future with the authors of school-books from other countries.
In September of 1974 it was ten years since the establishment of the Information and Documentation Centre for the Geography of the Netherlands. To commemorate this modest anniversary, the I.D.G. arranged two excursions in August to a group of some 30 foreign geographers, who are concerned with the geography of the Netherlands mainly in their capacity as the authors of school textbooks. There was also held in Utrecht in September a symposium on the theme of "Geography and Communication".

We give below the names and locations of a few important firms representative of these industries (see fig. 5):

NAME OF FIRM	NATURE OF PRODUCTION	LOCATION OR LOCATIONS
Metal manufacturing and metal goods		
Philips	Electrical engineering	Eindhoven; numerous ancillary plants at home and abroad.
Estel (Hoogovens-Hoesch)	Blast furnaces, steel manufacture	IJmuiden/Velsen
Rijn-Schelde-Verolme	Shipbuilding and repairs	Rotterdam, Flushing etc.
Fokker-VFW	Aircraft	Schiphol (Amsterdam)
DAF	Motor vehicles	Eindhoven, Born (South-Limburg)
Aluminium	Aluminium	Delfzijl
VMF	Machines	Amsterdam, Utrecht, Hengelo
Food, drink and tobacco		
Unilever	Margarine etc. (also soap and detergents)	Vlaardingen, Rotterdam etc.
Heineken	Beer	Rotterdam, Amsterdam, 's-Hertogenbosch
Van Nelle	Coffee, tea, tobacco	Rotterdam
Nutricia	Milk products, baby foods	Zoetermeer (near The Hague)
Centrale Suiker-Maatschappij	Sugar etc.	Halfweg (near Amsterdam), Sas van Gent (Zeeland Flanders); Breda
Hero	Canned and preserved vegetables and fruit, soft drinks	Breda
Verkade	Chocolate, biscuits	Zaanstad
Chemicals		
Koninklijke/Shell Groep	Petro-chemicals	Pernis (near Rotterdam), Moerdijk etc.
Akzo	Artificial fibres, salt etc.	Arnhem, Breda, Emmen, Hengelo, Delfzijl
Dutch State Mines	Artificial fibres, fertilizers, plastics etc.	Geleen (South-Limburg)

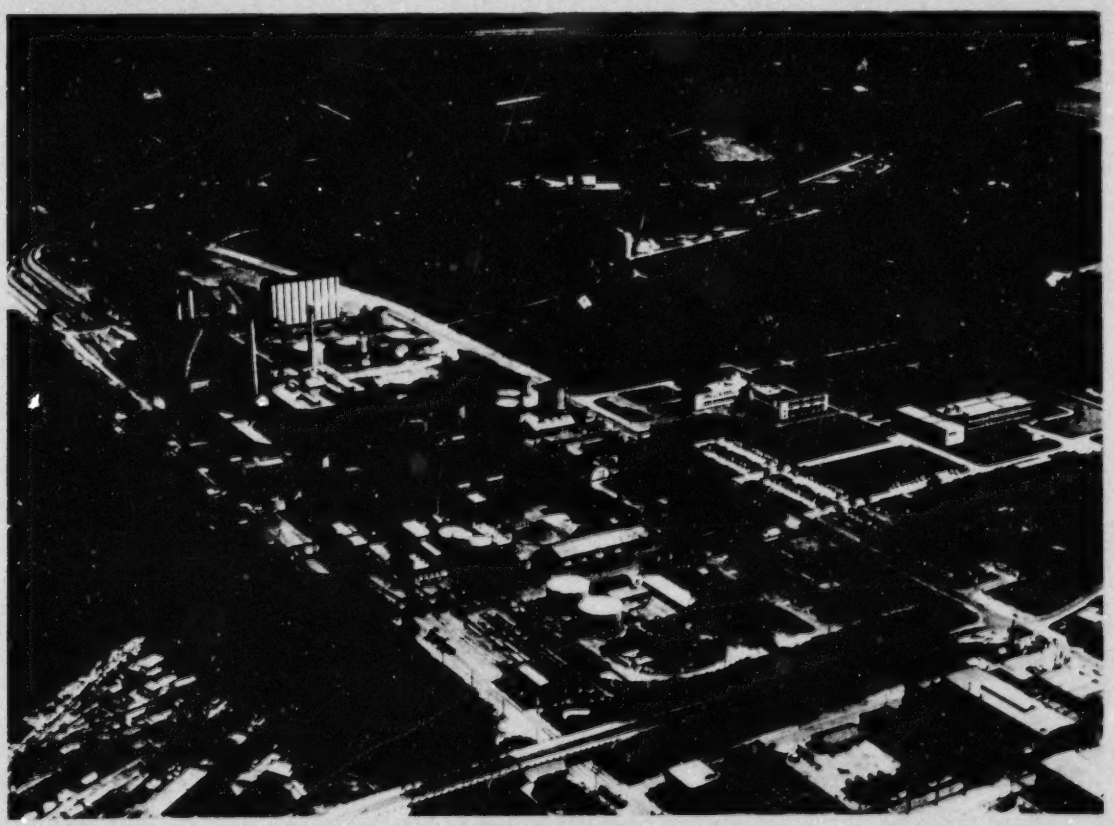


Photo VI – Akzo-salt industry in Hengelo (Akzo-Zout Chemie).
In the background the drills can be seen in the salt fields; in front, the vacuum salt factory, situated in a favourable position for transport near the Twente Canal, road and railway. There are extensive reserves of salt; salt and salt products are exported in large quantities.

As far as the *distribution* of industry over the country is concerned, the centre of gravity has traditionally been the western coastal provinces, where industry was already flourishing around the ports in earlier centuries.
In 1970, 45% of the persons employed in industry were to be found in the four western provinces, 25% in the south, 20% in the east and 10% in the north. While other factors, such as a large labour reserve and the presence of minerals and industrial crops as raw materials, also led to the establishment of industries elsewhere, the western provinces still remain the major centre, even after taking into account the recent expansions of industry in other parts of the country (see the table below).

Investments in fixed assets in industry, 1970

in millions of guilders	Metal mfg. and metal goods	Food, drink & tobacco	Chemicals	Total
North	146,6	136,3	185,0	570,8
East	229,3	150,7	138,0	848,1
West	956,6	299,2	1201,1	2849,4
South-West	175,1	17,4	330,9	537,3
South	446,1	232,5	317,0	1368,0
Netherlands	1953,8	836,3	2171,6	6174,1

Photo VII — Eemshaven Project in North Groningen, to the north of Delfzijl.
The project was undertaken to prevent congestion in the ports in the Western Netherlands and to help the economic development of the North. The first stage envisages the provision of a port and industrial area of 800 hectares, 100 ha. of which will accommodate the power station seen in the foreground.
The Groningen countryside which continues to increase in area due to the formation of alluvial deposits can be seen in the background. Top centre: the reclamation operations can be see, with, left, the parallel dykes which indicate earlier reclamations.

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As was described in Chapter I, the central government is trying to achieve a more uniform distribution of industry and of other economic activities (photo VII, page 21). In addition to positive measures in areas where the economy is stagnating (northern provinces and South Limburg), consideration is now also being given to restraining the establishment of new industries in the west (Selective Investment Scheme; see page 10). There is considerable doubt about the success of this measure. One of the questions being asked is whether it is reasonable to reduce the locational advantages of the west artificially. It is also very questionable whether the firms affected by the measure will actually establish themselves in the expansion areas. It is highly likely that they will either choose a location as close as possible to the Randstad or migrate to another country.

Commerce and transport

The following table gives an overall impression of the nature of imports and exports:

1973, %

Imports		Exports		
Raw materials and semi-manufactures	64	Raw agricultural products		8
Consumer goods	16	Minerals		6
Capital goods	14	Manufactures, total		86
Other commodities	6	of which		
		food, drink and tobacco	18	
Total	100	textiles and clothing	6	
		petroleum products	9	
		chemical products	18	
		metal goods	29	
		other manufactures	6	
		Total		100

The emphasis on "working-up" in the economic activity of the Netherlands is readily apparent. 64% of imports consist of raw materials and semi-manufactures, while manufactures account for 86% of exports.

The following table shows the countries with which the Netherlands does most of its trade.

Countries, 1973, %	Imports	Exports
West Germany	28	33
Belgium and Luxembourg	14	14
France	8	10
United Kingdom	5	8
U.S.A.	9	4
Italy	4	6
Other countries	32	25

A substantial part of this trade was with the Netherland's EEC partners, namely 60 per cent of imports and 73 per cent of exports.

The balance of trade, which had previously always been negative, showed a surplus in 1972 and 1973. If services are included, the balance of payments was also positive for those years.
A large proportion of Dutch imports and exports are carried by sea and the figures below show the great predominance of Rotterdam in this movement of goods.

Transport of goods by sea, in thousands of tons, 1973	Discharged	Loaded	Total
Rotterdam	224 503	74 843	299 346
Amsterdam	14 352	6 251	20 603
IJmuiden/Velsen	9 628	2 102	11 730
Terneuzen	4 725	1 531	6 256
Delfzijl	1 030	1 488	2 518
Other ports	8 720	2 364	11 084
Total	262 958	88 579	351 537

Over 65% of the tonnage of goods imported into Rotterdam-Europort consisted of mineral oils and over 10% of ores.

A constantly increasing proportion of *inland goods transport* goes by road at the expense of the railways, as appears from the figures below, which do not include the rapidly growing volume of materials transported by pipe-line.

Inland goods transport	1963		1972	
	Million ton-kilometres	%	million ton-kilometres	%
inland waterway	5874	36	8176	35
rail	2567	16	1390	6
road	7652	48	13973	59
TOTAL	16093	100	23539	100

The figures also show the considerable share of inland waterway traffic, which is largely a reflection of the extensive network of good navigable waterways that considerably exceeds the length of the rail network.

1st Jan 1973	length in kilometres
waterways	4354
railways	2843
roads (outside the built-up area)	50074
of which with dual carriageways	1530

80% of the waterway network consists of canals and 20% of rivers. The shipping lanes on the IJssel Lake etc. are excluded from this calculation.
Approximately 30% of all waterways are navigable by ships of 1,500 tons.

PHYSICAL PLANNING

In 1974, physical planning in the Netherlands formed the subject of many publications and the theme of many conferences, such as the Symposium held to commemorate the centenary of the Royal Netherlands Geographical Society (K.N.A.G.).
The reason for this is the appearance at the beginning of that year of the Orientation Memorandum on Physical Planning (see list of references at the back of this Bulletin), which is intended as the first part of the Third Memorandum on Physical Planning in the Netherlands, sub-titled "Background, assumptions and policy intentions of the Government".
Of the two previous memoranda, the Second, in particular (1966), which gave a structure sketch of the Netherlands in the year 2000, received a great deal of attention. There are two sets of reasons why the Government now, eight years later, considers the time ripe for the publication of a Third Memorandum.

1 – Many of the assumptions in the Second Memorandum have since been overtaken by events or are now evaluated differently.
2 – Many of the objectives of the Second Memorandum have so far not been realised and, in some instances, there have been developments in the contrary direction.

With reference to the first point, because of the rapid changes, particularly in the birth-rate, the present population projections are considerably lower than those used in the Second Memorandum. The figures below indicate the marked decline in the natural increase, resulting from

- the fall in the birth-rate (caused by the reduction in family size and postponement of the birth of the first child)
- the slight rise in the death-rate (reflecting the ageing of the population).

per thousand	birth-rate	death-rate	natural increase
1960	20,8	7,6	13,2
1972	14,5	8,2	6,3

While the Second Memorandum of 1966 assumed a Netherlands population of 20 million in 2000, the present projections range around the 15 million mark.

Secondly, we may refer to changes in the evaluation of certain social developments, such as:

- the efforts to achieve *economic growth*, viewed against the background of environmental pollution, the increased demands on space in the densely populated Netherlands and the world shortage of raw materials.
- the increasing *mobility* of the population, caused particularly by the greatly increased car ownership. The same objections apply here as above, with the additional factor of the greatly increased number of traffic accidents.
- a changed evaluation of the *countryside*, which is no longer seen exclusively, and sometimes not even in the first place, as an area of agricultural production. Such matters as recreation, nature conservation and the effect of contrast in urban areas are coming to play an increasingly important part.
- the efforts to achieve a more even distribution of population and employment over the country, concentrating upon the relief of congestion in the west and an more rapid growth in the north. The following questions were among those raised during the discussion of this aspect: Can the problems of the west, and particularly those of the Randstad Holland, be solved by such a decentralisation policy? Will not the cities in the other regions shortly be faced with the same problems as the Randstad? Would it not be preferable from the point of view of environmental variety to permit the continuance of the difference in population density between the regions, in order to prevent a levelling-out process in town and country?

With reference to point 2 – The Orientation Memorandum gives a summary of ten points on which the present physical pattern differs from that proposed in the Second Memorandum. They include the following:

- the lag in the population growth of the North;
- the extensive suburbanisation;

- the erosion of the central open space between the urban zones;
- the falling behind of developments in the field of urban renewal, the extension of the road network and the expansion of public transport.

Following upon the arguments decribed above supporting the drawing up of a Third Memorandum on Physical Planning, a number of objectives have been set up. High among them is the striving to achieve an improvement in the quality of living conditions. In this connection, the Memorandum refers, among other things, to the need to reconsider the objective of economic growth, the need to achieve a stationary population and to place limitations on mobility. (Among the ways of achieving the latter would be the reduction of the distances between home, work-place and recreational areas).
The Memorandum also contains proposals for a set of policy measures designed to achieve the objectives we have just outlined. Among those of interest are new legislation for urban renewal and rural planning (the latter with a wider scope than the Land Consolidation Act of 1954), environmental legislation covering soil pollution, removal, storage and disposal of waste materials, noise nuisance (additional to the existing laws relating to air and water pollution). As far as physical planning as a whole is concerned, a plea is made for a greater intergration of plans at the national, provincial and municipal levels.
In addition, studies have already been in progress for many years in respect of the introduction of "gewesten" (districts). In many ways the approximately 840 municipalities form too slender a basis and the 11 provinces too wide a basis for the carrying out of an effective policy. The creation of the Rijnmond Authority, in which 23 municipalties in the region of Rotterdam have surrendered some of their powers, as well as the numerous other forms of municipal collaboration in other parts of the country, are indicative of the same tendency. The same is true of the numerous annexations and amalgamations of municipalities. On 1st January 1974, for example, there was established *Zaanstad* (125,000 inhabitants), by the amalgamation of Zaandam and six neighbouring municipalities.
In order to get discussions started at an early stage, the Third Memorandum has not been published as a single document. Following the appearance of the Orientation Memorandum, sub-memoranda will deal in greater detail with such aspects as traffic and transport, seaports, water economy, urbanisation, rural planning, administrative divisions of the Netherlands.
Both the Orientation Memorandum and the sub-memoranda will be the subject of a full public participation procedure, in which both citizens and parliament will be able to make known their views.

NOTES IN BRIEF

1. Traffic

The following are some of the major traffic roads that have been completed in the last two or three years:

- road over the dam in the Brouwershavense Gat between the islands of Goeree-Overflakkee and Schouwen-Duiveland (Delta region);
- a section of road in the Betuwe (between the rivers Rhine and Waal) to complete the national road connecting Rotterdam-Gorinchem-Tiel-Arnhem;
- a new national road from Utrecht to Hilversum;
- the road from Eindhoven to the Belgian frontier (E3), forming part of the road from Antwerp via Eindhoven en Venlo to the Ruhr;
- sections of the road from the Randstad to Twente (E8);
- the "motorway box" round Rotterdam, designed to keep through-traffic out of the city; 45 kilometres in length and including such major engineering works as fly-over intersections and river crossings (van Brienenoord Bridge in the east and Benelux Tunnel in the West; photo VIII).

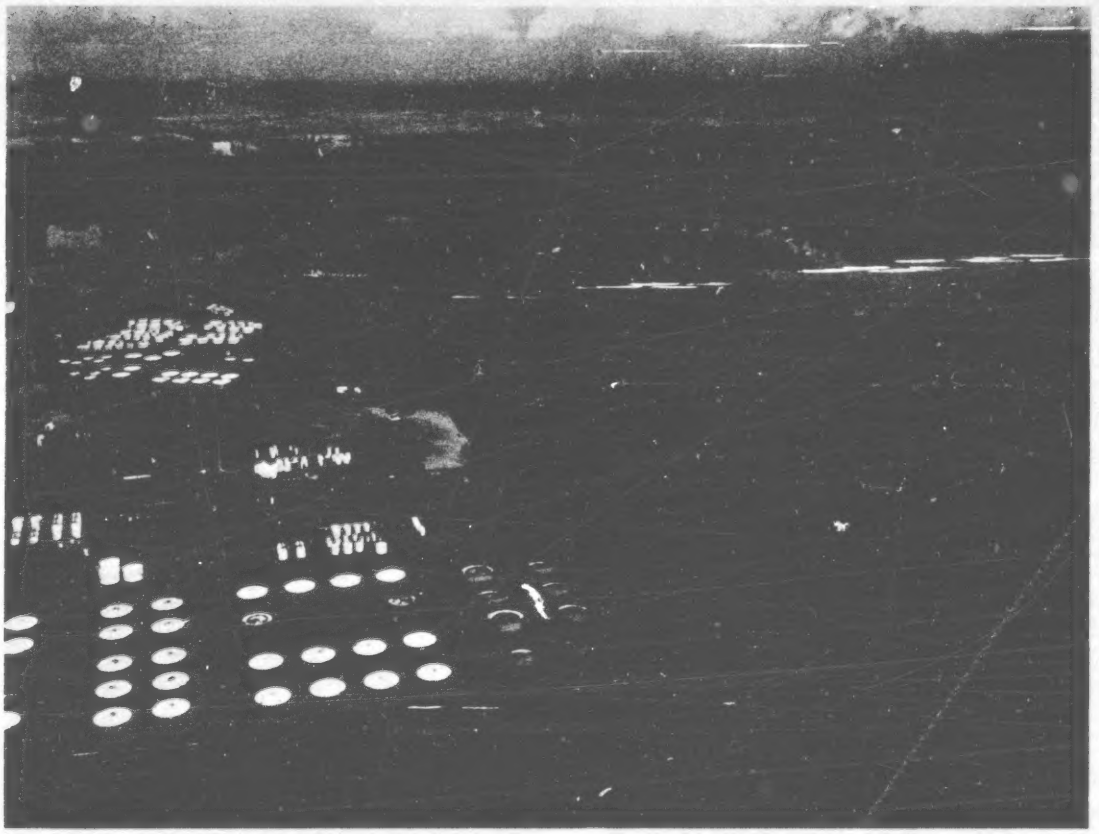

Photo VIII – The village of Pernis (right) on the New Maas to the west of Rotterdam. Centre: the southern approach to the Benelux Tunnel which forms part of the "motorway box" round Rotterdam. Left: the No. 2 Petroleum Port, the Shell (in the foreground) and Chevron refineries. On the far side of the river: left, Vlaardingen and right, Schiedam.

The growing concern of the public and the authorities for the preservation of nature and the environment has led, in a number of instances, to the construction of particular roads being abandoned, or to proposed lengths of road being realigned, in order to save important natural areas.

Public transport is in an extremely critical financial position. Only government support can prevent further collapse and carry out the highly necessary improvements.
The following works are at present under construction:

- a new commuter rail link from Zoetermeer to The Hague;
- the first underground railway in Amsterdam (from the city centre to Bijlmermeer), which is raising much dust both literally and figuratively, because the costs are now well over twice as much as the estimates;
- extension of the existing underground line in Rotterdam to Hoogvliet (completion in the autumn of 1974; photo IX);
- a second underground line in Rotterdam (from the city centre to the east).

Photo IX – The Metro viaduct, Zuidplein, Rotterdam. The station on the right was originally the terminus of the 6 km-long metro line which came into operation in 1968, linking the north of Rotterdam with the south. Zuidplein, with its metro and bus stations, car park, shopping centre and theatre, is Rotterdam's most important centre on the south side of the river. The new portion, all above ground level, takes the original line out to the satellite town of Hoogvliet, and was opened in 1974. The total length of the metro is now 17 km, 3 km being underground, under te city centre and the river.

The building of the "Schiphol Line", a rail link from Amsterdam to The Hague via Schiphol, is in a advanced stage of preparation. The underground section near Schiphol was largely completed during the construction of the new airport. No details are yet known of the new railway planned to run from Amsterdam across the IJssel Lake Polders, via Almere and Lelystad, to the N.E.Netherlands.

Among the important improvements to *inland waterways* that have been wholly or partly completed are the following:

- a lock for push barges near Wijk bij Duurstede in the Amsterdam-Rhine Canal, to enable Amsterdam, after the completion of the widening of the canal, to be reached by the long convoys of push barges (photos X and XI);
- the Kreekrak locks near Bergen op Zoom, forming part of the new Scheldt-Rhine Canal, which will be completed in 1975.

The completion of the following works was of importance for ocean shipping:

- the Eemshaven in the N.E. of the province of Groningen (photo VII, page 21);
- the Maasvlakte, built up on the sea-floor to make possible the further extension of Europort. There are now on the site an electricity power station and an oil terminal. The plans to establish an iron and steel works have been deferred because of labour difficulties and for environmental reasons. It has now been decided, however, to build a new container terminal on the Maasvlakte. In order to be able to admit tankers with a greater tonnage than those able to enter at present (250,000 tons), it is proposed to deepen the 12 km long "oil channel", leading westwards from the port entrance near the Hook of Holland out into the North Sea, from 68 feet to 72 feet.

Photo X – Locks in the Amsterdam-Rhine Canal at Wijk-bij-Duurstede, looking south. Left foreground: the new lock (24 x 260 metres) for pusher units; right: the old locks. In the background the River Lek (the lower reaches of the Rhine), crossed here by the Amsterdam-Rhine Canal which joins the River Waal near Tiel.

Photo XI — Widening the Amsterdam-Rhine Canal between Amsterdam and Utrecht, looking south. The width is being increased from 70 to 100 metres; at the same time the depth is being increased where necessary to a minimum of 6 metres.

2. Water control works

In the *Delta Project* the following works have been completed: the movable storm-surge barrier in the Hollandse IJssel (No. 12 on fig. 6), all secondary dams (Nos. 8, 9 and 11), and the bridges over Haringvliet (No. 7, linking up with the Volkerak dam) and over the Oosterschelde (No. 10, the five-kilometre-long Zealand bridge). Of the primary-dams those in the Brielse Maas, the Haringvliet (with large drainage sluice gates), the Brouwershavense Gat and the Veerse Gat (Nos. 2, 3, 4 and 6) are ready, whilst only the largest dam, the one now being built in the Oosterschelde (No. 5), is still awaiting completion (photo XII, page 30).

The discussions between those supporting the construction of the Eastern Scheldt Dam on grounds of safety and those opposing it in the interests of the fishing industry and for environmental reasons, were given a further impetus by the publication in the spring of 1974 of the final report of the State Commission on the Eastern Scheldt.

This contains the suggestion that a moveable storm surge barrier should be constructed in the dam over the Eastern Scheldt, which would allow the tides to flow in and out sufficiently to safeguard the environment and the fishing industry to some extent, while on the other hand the tidal range would be sufficiently reduced to lessen the danger of flooding considerably. If the risk of flooding were imminent, the storm surge barrier could be closed. Secondary dams would be built in the eastern part of the Eastern Scheldt to divide it from the other Zeeland waterways. The Government and Parliament decided in November 1974 to investigate whether the construction of a dam of this type would be technically feasible.

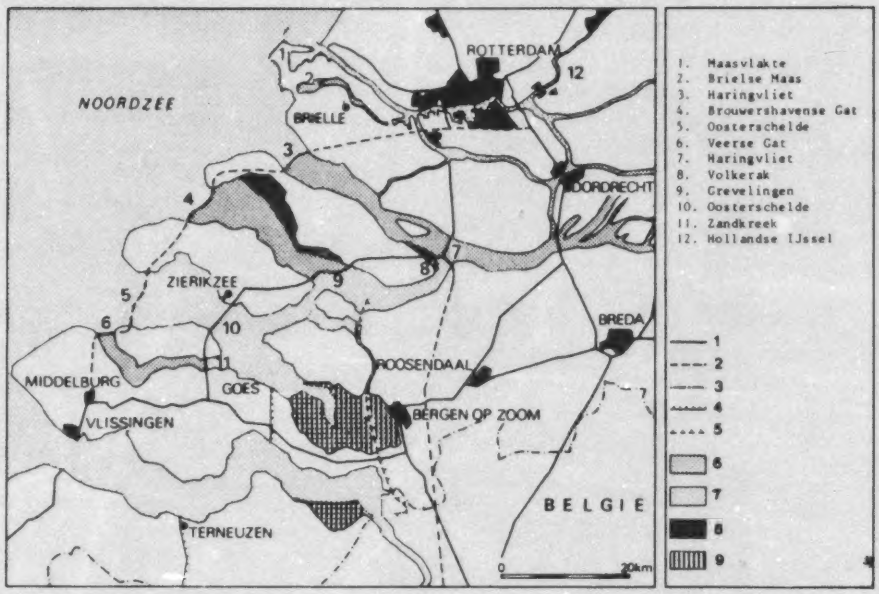

Fig. 6 – The Delta Project

1 –	*main road*	*4 –*	*canal*	*7 –*	*salt water*
2 –	*proposed road*	*5 –*	*proposed canal*	*8 –*	*urban areas*
3 –	*national frontier*	*6 –*	*fresh water*	*9 –*	*possible land reclamation*

Photo XII – Work on the Eastern Scheldt Dam, looking south. Foreground: the Island of Schouwen-Duiveland. On the far side North Beveland and behind it Walcheren; extreme right: the Veere Dam in the background. In the middle of the Eastern Scheldt part of the dam has been completed; the pylons for the cableway can be seen in the remaining three gaps. The cableway is used to drop huge concrete blocks into the water to close the channels; this technique was also used in constructing four earlier dams (see Fig. 6, Nos. 3, 4, 8 and 9).

One regularly recurring inaccuracy should be pointed out here: it is not intended to reclaim large tracts of polder-land behind these dams; in the Delta project land reclamation is of very minor importance.

In the *IJsselmeer area* the three southernmost polders are now the main scene of operations. In East Flevoland development of the land, the allocation of farms and the development of facilities, such as the building of the central town of Lelystad are in full progress. In South Flevoland – drained in 1968 – a start has been made with development of the land.
Action in regard to the last polder, the Markerwaard, several dike sections of which are completed, currently consists mainly of spoken and written words in the shape of a discussion at national level between those in favour of and those opposed to the construction of this polder. Besides implementation of the original plan (albeit with

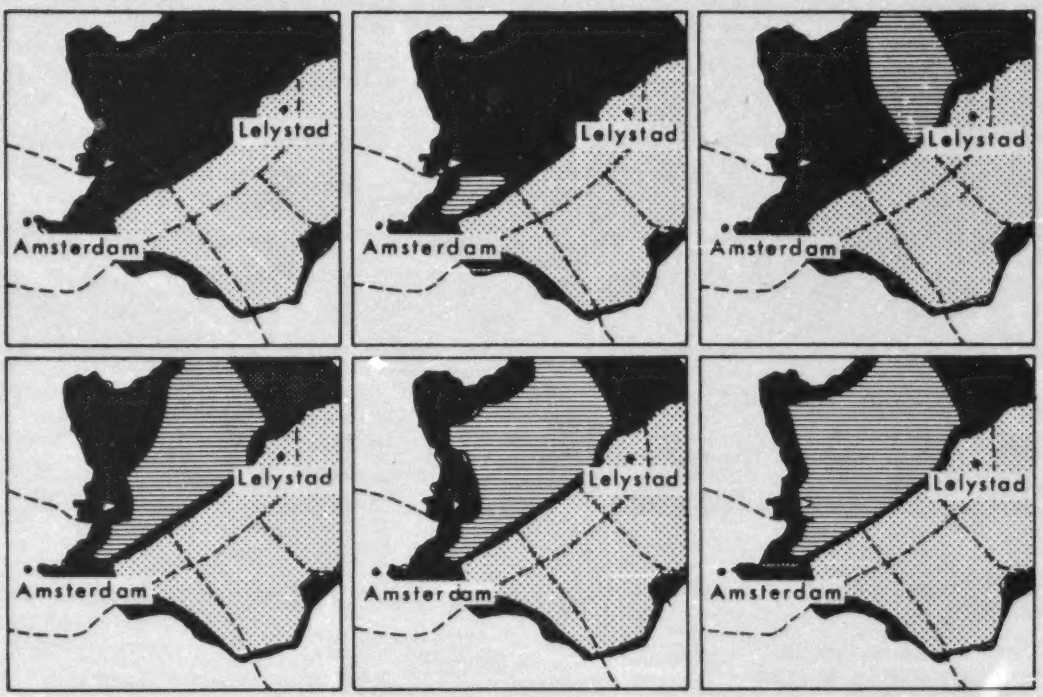

Fig 7 – Alternative reclamation plans for Markerwaard.

the peripheral lakes considerably wider in places) as one extreme, and at the other extreme the proposal to abandon the idea of the polder entirely, Rijkswaterstaat has put forward a further four alternative proposals (fig. 7). A definite decision is to be expected in the foreseeable future.

This discussion is symptomatic of the extent to which the views and objectives in regard to the Zuyder Zee Project as a whole have changed in little more than half a century. When the legislation authorising the closure and partial drainage of the Zuyder Zee was passed in 1918, the reclamation of valuable agricultural land was the main consideration – ad far as the drainage was concerned.
Now we see that the newest polders are assuming increasing importance in the physical planning of the country as a whole, with the urban elements tending to dominate.
In consequence, the southern IJsselmeer polders, with Lelystad in East Flevoland and the much larger Almere in the south west of South Flevoland will, as urban centres have the task of absorbing the overspill of the northern part of the conurbation of Western Holland (Amsterdam and the Gooi: photo XIII, page 32).

Photo XIII – The western part of Southern Flevoland, looking west. The town of Almere is to be built in this part of the polder and the first residents are expected by 1976. In the background left: the bridge to the "mainland" at Muiderberg; in the centre Lake Y, beyond which lies Amsterdam.

These variations on the predominantly agrarian theme of the original plan constitute an element which is essential to the geographic approach to the Zuyder Zee Project.

In 1973, two *drinking water reservoirs* came into use in the *Biesbos*, the former fresh-water tidal delta south-east of Dordrecht (photo XIV). They are connected by a pipe-line with Rotterdam. These reservoirs have brought a considerable improvement to the drinking water situation in Rotterdam, which had become critical because of the increasing salinity of the groundwater and the pollution of the Rhine. Contributing to the improvement is the fact that the Biesbos reservoirs are supplied with purer water from the river Meuse.

Lastly, we would emphasize that there is at present absolutely no definite plan to reclaim the Waddenzee or part of it.

3. Miscellaneous

– In October 1973 a conference was held in Brunswick, West Germany, organised by the International Text-Book Institute, established in that city, and the Information and Documentation Centre for the Geography of the Netherlands. During this meeting, authors of school textbooks from the Federal Republic and from

– The I.D.G. is regularly asked for assistance in the prepartion of geographical field trips in the Netherlands. It therefore seemed useful to offer a few general suggestions and some guidance for the organisation of such excursions.

The Netherlands is a small country with quite a dense network of motorways. By choosing a base for excursions in the centre of the country, any area to be visited will seldom be farther than 150 kilometres (100 miles) distant. It appears in practice, however, that distances are often underestimated and wholly impracticable programmes are proposed. Such factors as the great density of traffic, particularly in the west, during the rush-hours and summer-week-ends, should not be overlooked when making plans.

Among the permanent exhibitions, museums etc. which we can recommend including in an excursion are the following:

- The Netherlands Open Air Museum at Arnhem (windmills, farmsteads, old crafts etc.).
- The Flevohof, permanent exhibition in East Flevoland dealing with agriculture in the Netherlands, with exhibition buildings, modern livestock, arable and horticultural holdings etc.
- Delta Expo, situated at the southern and of the Haringvliet Dam on the island of Goeree-Overflakkee: An exhibition of the Delta Scheme and an opportunity to inspect the interior of the Haringvliet sluices.
- Exhibition at Lelystad-haven in East Flevoland about the enclosure of the Zuyder Zee and the drainage and planning of the IJssel Lake polders. For information about other exhibitions and museums in the Zuyder Zee region, reference should be made to the relevant I.D.G. Excursion Guide.

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PERIODICALS

- Rotterdam-Europoort-Delta (also in english and german)
  4 x per year; Havenbedrijf der Gemeente Rotterdam.
- T.E.S.G. (Tijdschrift voor economische en sociale geografie, Journal of economic and social geography).
  6 x per year; partly in english.
  Royal Netherlands Geographical Association (KNAG), Amsterdam

This periodical is an important source of information for those interested in economic and geographic developments in the Netherlands. A large part of the scientific work published by Dutch geographers appears in TESG, usually in English, with articles in Dutch summarised in English.
The following are examples of articles published over the last few years:

- 1972, no 3

G. J. van den Berg	On the relation between geography and physical planning in the Netherlands.
G. A. Hoekvel	The Netherlands in Western Europe.
W. Steigenga	Randstad Holland: concept in evolution.
R. Tamsma	The Northern Netherlands: large problem area in a small country, small problem area in a large economic community.
W. P. G. Toonen	The economic restructuring of South Limburg between 1965 and 1971.
W. F. Heinemeyer & R. van Engelsdorp-Gastelaars	Conflicts in land use in Amsterdam.
A.K. Constandse	The IJsselmeerpolders: an old project with new functions.
M. Snijdelaar	Water management of the Netherlands: the struggle for water.
C. W. W. van Lohuizen	A geographical typology of the Netherlands, 1960–1980–2000 (with three coloured maps).

- 1972, no. 4

D. T. Herberts & J. A. Edwards	Images of Randstad.

- 1972, no. 5

C. Cortie & R. van Engelsdorp-Gastelaars	Migration from Amsterdam.

- 1974, no. 4
  Special issue on the Physical Planning Orientation Report 1974.